The Ontario Mental Health Foundation

Established by Special Act of Legislature of the Province of Ontario, 1960-61.

Members as at March 31, 1983:

Phyllis Creighton, M.A. Chairman – Toronto
Paul Black, B.A., Vice-Chairman – Toronto
Laura Barr, B.ScN. – Toronto
Donald Brookes, B.Comm. – Toronto
Paul Douglas, C.A. – Ottawa
John Hughes – Toronto
John Ingle, M.B.A. – Mississauga
Peter Lush, CPM – Burlington
Abbyann Lynch, Ph.D. – Toronto
Prof. James Reed – Toronto
Ann Van Fossen, M.A. – Mississauga
Mary Weaver, B.A. – Sudbury
George Zaritzky, C.G.A. – Rexdale

Retirements in 1982:

Edward Bennett
Jack Sibley

Personnel:

Dugal Campbell, Ph.D., Scientific Consultant
Margaret Clark, Executive Director
Louise Brown
Anita Macatangay
Jessie Paterson
Audrey Stefanovich

Chairman's Report

The Ontario Mental Health Foundation continues to play a key role in research into mental illness. It takes a vital place in the provincial health research scheme, in light of growing community awareness of the burden and anguish of mental illness and the urgency of finding answers. In the past year the Foundation has provided much-needed support to investigators and innovative work through its grants and fellowships programs.

The John Dewan award, which the OMHF gives to recognize outstanding achievement, was jointly awarded to two of its investigators: Dr. Radhey Singhal, chairman of the Department of Pharmacology in the University of Ottawa, who as a leading psychopharmacologist through wide-ranging research has provided both better understanding of the psychopathology of depressive disorders and treatment guidelines for clinicians; and Dr. Harvey Stancer, vice-chairman of the Department of Psychiatry in the University of Toronto, for basic research in diverse fields – neurochemistry, neuroendocrinology, biochemistry, pharmacology, and genetics – as well as clinical investigations, particularly in affective disorders, which have made an important contribution to our understanding of mental illness and its treatment.

The OMHF again put its valuable scientific and administrative capabilities to work for a broad constituency. Scientific review by its Research Committee assisted the Ministry of Community and Social Services in choosing the projects for awards in the fourth and final competition for research related to services for children. This research, funded by a provincial lottery grant to that ministry and administered by the Foundation, has been focused on prevention and on evaluation of treatment and rehabilitation strategies. The OMHF was pleased to receive ongoing contributions from the Ruth Schwartz Foundation and the Velleman Foundation, and put them to good use respectively in supporting research into learning disabilities in children and mental retardation.

The OMHF's need for professional competence and advice was well met by its Medical Advisory Board under the skilled chairmanship of Dr. Gil Heseltine, who during this period has also been Executive Coordinator, Mental Health Planning for the Ministry of Health. He has been ably seconded by Dr. Dan Offord. The Board's work was facilitated by the diligent efforts of the Research Committee, chaired by Dr. Chris Webster, and the Fellowships Committee under Dr. Yvon Lapierre. The many hours of service given by its professional advisers were complemented by the dedication of the lay members of the Foundation. The OMHF owes a special debt of gratitude to members completing their term of office in the past year: Mr. Jack Sibley, who served for three years; Dr. Edward Bennett, who gave for six years, and Miss Laura Barr, whose six years of capable service included four-and-a-half on the Executive Committee and two as an OMHF representative on the Joint Research Review Task Force.

The Foundation's Executive Director Mrs. Margaret Clark and Scientific Consultant Dr. Dugal Campbell provided dedicated and effective leadership. On the OMHF's behalf, they also helped organize the successful program Health Research Ontario 1983, a joint undertaking of the statutory and non-statutory foundations held at the Ontario Science Centre from 3 March to 4 April.

Highlights of the Foundation's work over the past year include: developing a policy on publication and mechanisms for its implementation; formalizing a policy on conflict of interest; establishing an audit committee; commissioning Dr. Campbell to investigate the field of prevention with a view to new initiatives; holding a one-day symposium with OMHF investigators and medical directors from a number of industries to gain first-hand knowledge of the industrial setting and to promote mutual dialogue; developing new strategies and a new team under Mr. Peter Lush to seek the support of corporations for our work; and embarking on a public relations program to make the OMHF more visible and better known in the community. These developments all hold the promise of worthwhile new directions for the Foundation. At the end of my own six years as a member, and year-and-a-half as chairman, I leave the OMHF convinced of the importance of the work the Foundation undertakes, and confident of the progress that the coming year will bring.

Phyllis Creighton

Phyllis Creighton, M.A.
June 1983

Scientific Report

During 1982-83, the advisers of the Foundation considered the general direction of the research work supported by the Foundation. A review of the whole range of investigation supported by the Foundation is made each year with a view to ensuring that the Foundation brings to the Province – and to the health services of the Province – knowledge which is up-to-date with scientific advances related to our understanding of mental health and the disorders of mental health.

In addition, the Foundation's advisers review the entire range of work in mental health to make sure that no important topic is missing from the repertoire of research conducted in the Province. By means of such a review it is possible to ensure that, in the long run, the Foundation's work stays current and that no element which may be of service to the Province is missing.

In this year's review, the Foundation began to consider particularly two kinds of investigation which have been absent from the roster of work supported. These are: work on the prevention of mental illness and work on the promotion of mental health.

To examine what may be done in the way of research into the prevention of mental illness, the Advisory Board of the Foundation has struck a sub-committee of enquiry. Members of the sub-committee have visited researchers active in this field in the United States and have acquired a range of information concerning the kinds of investigation which have been successfully carried out. With this new information in hand, the Foundation will be in a position to assess if it can usefully take new initiatives which will encourage sound research in preventative research.

The year has also been marked by discussion concerning the way in which the health research of the Province of Ontario should be directed. These discussions, which have continued intermittently for the past few years, took on a new direction and urgency with the appointment of a task force by the Ontario Council of Health under the Chairmanship of Dr. Donald Layne.

This task force has now reported to the Council of Health and to the Minister, The Honourable Mr. Larry Grossman, who announced his decisions about the recommendations at the opening of Health Research Ontario '83 – "Alive and Well". He announced that a new body would be set up to plan and co-ordinate research: The Health Research and Development Committee of Ontario. This new body will set policy and make recommendations concerning the support for health research which is derived from the Provincial treasury.

The Foundation, as a statutory body which derives the greater part of its income from the Ministry of Health research vote, will undoubtedly be influenced by the decisions of the new body. Members of the Foundation and its advisers look forward to working with the chairman when he is appointed and the members of his committee.

Foundation Programmes

As a statutory foundation, the OMHF receives most of its funds in the form of an annual grant from the Province of Ontario.

The Foundation offers 1) individual awards to those who wish to take up careers in mental health research, and 2) support for research projects undertaken by investigators who plan to do research in the field of mental health. The Foundation also supports teaching in departments of psychiatry in the medical faculties of Ontario universities.

A complete listing of all research projects, major equipment grants, and individual awards funded by the Foundation in 1982-83 will be found on the following pages of this Report.

How to Apply for Grants

Each July, a booklet is published which provides up-to-date information on grants provided by the Foundation. Copies of the Rules for Project Research and Individual Awards may be obtained from the research offices at universities in Ontario, or upon request from the Foundation.

The Ontario Mental Health Foundation
Balance Sheet as at March 31, 1983

Assets	1983 $	1982 $
Operating Section		
Current Assets		
Cash	15,078	7,386
Investments – at cost, which approximates market, plus accrued interest	500,256	408,467
Advances to grantees (note 5)	120,463	51,823
Unspent awards receivable (note 6)	1,145	27,666
Due from Endowment Fund	19,267	—
Due from COMSOC Fund	15,060	13,316
Advances	—	17,872
Prepaid expenses	703	624
	671,972	527,154
Fixed Assets		
Furniture and fixtures – at cost	45,264	43,412
Accumulated depreciation	22,708	19,493
	22,556	23,919
Total assets – Operating Section	694,528	551,073
Endowment Fund		
Cash	6,479	9,653
Investments – at cost, which approximates market, plus accrued interest	1,096,129	945,524
Total assets – Endowment Fund	1,102,608	955,177
Lottery Fund		
Investments – at cost, which approximates market, plus accrued interest	225,881	284,156
Advances to grantees (note 5)	38,101	11,250
Due from Operating Section	27,580	—
Total assets – Lottery Fund	291,562	295,406
COMSOC Lottery Grants Fund – Held in Trust (note 4)		
Cash	—	1,647
Investments – at cost, which approximates market, plus accrued interest	672,558	557,964
Advances to grantees (note 5)	43,323	110,516
Unspent awards receivable (note 6)	35,034	—
Total assets – COMSOC Lottery Grants Fund	750,915	670,127
Total Assets	2,839,613	2,471,783

Signed on behalf of the Board

Chairman

Vice-Chairman

Liabilities and Equity	1983 $	1982 $
Operating Section		
Current Liabilities		
Research and equipment grants, fellowships and associateships payable	**261,139**	227,884
Accounts payable and accrued liabilities	**7,461**	21,958
Due to Lottery Fund	**27,580**	—
	296,180	249,842
Surplus - Operating Section		
Balance - beginning of year	**301,231**	195,890
Excess of revenue over expenditures for the year	**97,117**	105,341
Balance - end of year	**398,348**	301,231
Total liabilities and surplus - Operating Section	**694,528**	551,073
Endowment Fund		
Awards payable	**2,000**	1,100
Due to Operating Section	**19,267**	—
Endowment Fund Balance	**1,081,341**	954,077
Total liabilities and equity - Endowment Fund	**1,102,608**	955,177
Lottery Fund		
Lottery Fund Balance	**291,562**	295,406
Total liabilities and equity - Lottery Fund	**291,562**	295,406
COMSOC Lottery Grants Fund - Held in Trust (note 4)		
Bank indebtedness	**71**	—
Grants payable	**22,308**	2,641
Due to Operating Section	**15,060**	—
COMSOC Lottery Grants Fund balance	**713,476**	667,486
Total liabilities and equity - COMSOC Lottery Grants Fund	**750,915**	670,127
Total Liabilities and Equity	**2,839,613**	2,471,783

Statement of Financial Activities
Operating Section
For the year ended March 31, 1983

	1983 $	1982 $
Revenue		
Province of Ontario	**2,269,800**	1,997,500
Investment income	**91,401**	93,996
Velleman Foundation	**18,000**	18,000
	2,379,201	2,109,496
Expenditures		
Awards		
Research grants	**1,168,547**	1,032,906
Major equipment	**26,151**	85,046
Research associateships	**331,257**	257,734
Research scholarships	**230,118**	170,011
Training awards	**32,850**	—
Fellowships		
Long-term	**92,000**	69,096
Research	**62,888**	81,847
Teaching	**—**	21,392
Research studentships	**69,976**	39,750
Educational associateships	**48,946**	91,671
C.M. Hincks Lectures	**(498)**	8,429
Health Research Ontario/ Smoking Conference	**6,000**	4,175
Velleman Scholarship	**22,929**	20,510
	2,091,164	1,882,567
Administration (including fee income of $18,887 (1982 - $13,316) for administration of the COMSOC lottery grants fund and depreciation expense of $3,215 (1982 - $1,315))	**181,367**	159,608
Committee meetings expenses	**30,968**	38,014
	2,303,499	2,080,189
	75,702	29,307
Transfer from Lottery Fund	**—**	16,649
Transfer from Endowment Fund (note 2)	**21,415**	59,385
Excess of revenue over expenditures for the year	**97,117**	105,341

Statement of Changes in Endowment Fund

For the year ended March 31, 1983

	1983 $	1982 $
Balance - beginning of year	**954,077**	842,458
Donations for the year	**21,415**	59,385
Investment income	**139,195**	118,518
	160,610	177,903
	1,114,687	1,020,361
Paul Christie Award	**351**	100
John Dewan Award	**2,056**	1,049
Fund raising expenses	**9,524**	5,750
	11,931	6,899
	1,102,756	1,013,462
Transfer to Operation Section (note 2)	**21,415**	59,385
Balance - end of year	**1,081,341**	954,077

Statement of Changes in Lottery Fund

For the year ended March 31, 1983

	1983 $	1982 $
Balance - beginning of year	**295,406**	15,719
Lottery Grant	**—**	250,000
Investment income	**41,035**	45,406
	336,441	311,125
Awards expense (recovery) -		
Research fellowships	**—**	(930)
Research grants	**44,879**	—
	44,879	(930)
	291,562	312,055
Transfer to Operating Section	**—**	16,649
Balance - end of year	**291,562**	295,406

Statement of Changes in COMSOC Lottery Grants Fund

For the year ended March 31, 1983

	1983 $	1982 $
Balance - beginning of year	**667,486**	648,648
Funds received from COMSOC for 1-3 year grants	**595,000**	244,000
Interest earned	**133,246**	116,735
	1,395,732	1,009,383
Research grants	**650,053**	341,897
Administration expense	**32,203**	—
	682,256	341,897
Balance - end of year	**713,476**	667,486

Auditors' Report to the Members

We have examined the balance sheet of The Ontario Mental Health Foundation as at March 31, 1983 and the statements of financial activities – operating section, changes in endowment fund, changes in lottery fund, and changes in COMSOC lottery grants fund for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the financial position of the Foundation as at March 31, 1983 and the results of its operations for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Coopers & Lybrand

Chartered Accountants
May 13, 1983

Schedule of Expenses

For the year ended March 31, 1983

	1983 $	1982 $
Administration		
Consultant's fees and expenses	20,694	17,160
Salaries	91,516	82,047
Rent	24,455	24,070
Foundation's share – Canada Pension Plan, employees' pension and unemployment insurance	9,964	8,932
Office supplies and expense	23,364	18,333
Audit	3,500	2,800
Telephone and telegraph	3,886	3,778
Depreciation – office furniture and fixtures	3,215	1,315
Sundry	752	744
Legal	—	429
Bank charges	21	—
	181,367	159,608

Additional Comments of Auditors

The schedule of expenses is presented as supplementary information only. In this respect, it does not form part of the financial statements of The Ontario Mental Health Foundation for the year ended March 31, 1983 and hence is excluded from the opinion expressed in our report dated May 13, 1983 to the members on such financial statements. The information in this schedule has been subject to audit procedures only to the extent necessary to express an opinion on the financial statements of the foundation and, in our opinion, is fairly presented in all respects material to those financial statements.

Coopers & Lybrand

Chartered Accountants
May 13, 1983

The Ontario Mental Health Foundation
Notes to Financial Statements
For the year ended March 31, 1983

1. Significant Accounting Policy

Fixed assets and depreciation

Fixed assets are recorded at cost less accumulated depreciation. Depreciation is calculated using the declining balance method at an annual rate of 10%.

2. Endowment Fund

Donations received are recorded in the endowment fund. Use of these funds is as directed by the members of the Foundation. Proceeds from donations received during the year, recorded in the Endowment Fund, have been transferred to the Operation Section and made available for grants and awards.

3. Lottery Fund

The lottery fund represents a grant from the Provincial Lottery Awards made to the Foundation through the Ministry of Health, and is designated and fully committed for use to support the Anorexia Nervosa and Enriched Programme on Alzheimer's Disease projects. The fund may not be used for other purposes.

4. COMSOC Lottery Grants Fund - Held in Trust

The Ministry of Community and Social Services (COMSOC) makes funds available from its Lottery Grants Programme for the support of research related to Childrens' Services. This research programme is being administered by The Ontario Mental Health Foundation.

5. Advances to Grantees

Certain projects are approved for funding for more than one fiscal year. Advances to grantees represent unspent funds from the current year's award which are to be carried forward and added to the following year's award.

6. Unspent Awards Receivable

Unspent awards receivable represent unspent funds at the time a project ends. Grantees are required to return this money to the Foundation.

7. Award Commitments

The Foundation has made commitments of approximately $6,633,061 to fund projects over the next nine years as follows:

1984	$2,276,628
1985	1,563,239
1986	654,270
1987	511,526
1988	472,704
1989	424,702
1990	354,738
1991	226,059
1992	149,195

Research Grants and Major Equipment Grants 1982-83

The Foundation received 71 new research grant applications and 8 applications for major equipment. Of this number 29 new grants and 3 major equipment requests were funded for a total of $847,338. In addition, 14 ongoing grants in the amount of $426,386. were supported.

McMaster University, Hamilton

Drs. G. Brown and L. Grota

Melatonin responses to light and dark. **$19,500.**
There are many substances in the body which ebb and flow to the cycle of light and dark. Melatonin fluctuates in such a way; in depressed patients, the melatonin cycle is more sensitive to the light-dark contrast than is the case in normal people.

Dr. P. Chang **$37,588.**

Pseudosulfatase deficiency - a paradox in neurodegenerative diseases (including a Major Equipment Grant).
There are a number of rare conditions in which children suffer progressive and degenerative disease of the nervous system. Dr. Chang is examining cells from patients with one such disease and is working out in detail the biochemistry of the disorder. A biochemical marker for the condition and a greater knowledge of the genetics of the condition may lead to the ability to identify the disease by a laboratory test early in life.

Drs. E.S. Garnett and G. Firnau **$30,210.**

To measure the distribution and concentration of the central dopaminergic receptors in normal man and patients with schizophrenic illness.
A device is being made to investigate the turnover of chemicals at precise locations in the brain. It detects signals emitted by radioactive material introduced into the blood stream and synthesized into chemicals active in the brain. The device is called a positron emission tomographic scanner and is being developed at McMaster University. The device is expected to have a substantial use in investigating the organic basis of mental illness.

Dr. P. Grof, et al **$35,233.**

Neuroendocrine response and recurrence liability in affective disorders.
One puzzling feature of affective illness is that patients who have been treated and cured may later fall ill again. This study is an attempt to detect which individuals are likely to relapse. The method is to examine hormone responses to challenge tests. The results suggest that there is one group of patients, with a relapsing illness, which can be identified by challenge tests whilst they are still in hospital.

Dr. R. Mishra **$35,534.**

Studies on interaction of prolyl-leucyl-gylcinamide (PLG) and substance P with biogenic amine receptors in CNS.

In this study the activity of one class of chemical substances is being examined by using both behavioral and biochemical model systems. The idea is to show that the substances in question have an effect not only upon brain cells but upon the behaviour of animals into whose brains the substances are injected. The substances are thought to be important because they alter the levels of other substances known to influence mental illness.

Dr. L. Niles **$25,767.**

Brain receptors for N-acetylserotonin and melatonin and pineal effects on brain and endocrine physiology.
Hormones sent out by the pineal gland influence the brain and physiology in general by acting on the central nervous system. These substances are thought to be important in the affective disorders and the present study is designed to find out more about the production of the pineal substances and their mode of action.

Dr. E. Rotstein **$27,975.**

Lymphocyte dopamine receptor binding in schizophrenia.
A difficulty in examining mental illness is that the critical events happen in the brain – among the most difficult of organs to examine. The theory that schizophrenia is a disorder of dopamine receptors can possibly be examined by looking at blood cells because these cells also contain dopamine receptors. The object of the research is to find out whether the dopamine receptors found in cells circulating in the blood are similar to those found in the brains of patients with schizophrenia.

Dr. J. Seggie **$19,500.**

Pharmacological manipulation of the septal syndrome: possible model for affective disturbance.
An animal model is useful for the investigation of disease. Dr. Seggie is examining an animal model for emotional disorders. This investigation is an attempt to see how complete the model is by finding out if alterations in hormone level mimic those which are found in depressed patients.

Drs. L. Siegel and J. Crawford **$38,730.**

The role of perinatal risk factors in subsequent cognitive and language development.
Paediatricians are now able to save the lives of babies who are born too soon and too small to survive without special care. One question which can be asked is: are these babies damaged? Dr. Siegel and Dr. Crawford are examining this question by following two groups of infants treated in the neo-natal intensive care unit. Careful checks are being made of the babies' development – especially speech and intellect.

Dr. H. Szechtman **$25,431.**

Analysis of the behavioural syndromes induced by psychoactive drugs: amphetamine and apomorphine.
A new technique is available to examine the effects of drugs on behaviour; the technique consists of a very complete cinematograph recording of movement and a refined analysis of changes in movement produced by drugs. In animals this allows one to assess the effects of small doses of drugs or early effects of large doses. This device is being used to examine the effects of some well known psychoactive drugs.

Dr. S. Witelson **$12,307.**

Neural mechanisms and cognitive correlates of developmental dyslexia.
Dyslexia – inability to read – is a damaging condition which is found in school children. This study is an examination of how often it is associated with abnormalities of brain development and will test explanations of why boys and girls differ in their liability to have this disorder.

University of Ottawa

Dr. G. Fouriezos **$1,635.**

Enantiomers of amphetamine and brain stimulation reward.
This project is designed to examine how amphetamine acts upon the parts of the brain known as "reward" centres. It is known that some parts of the brain provide "reinforcement" to the animal; it is not known exactly how the different kinds of amphetamines act upon these centres nor is it known how they influence the way in which rewards operate.

Drs. P. Hrdina and Y. Lapierre **$35,096.**

Pharmacological studies on the site and mode of action of antidepressants.
Dr. Hrdina is examining the manner in which the drugs used in the treatment of depression operate by finding the relations between the levels of the drug which act upon cells in the laboratory and clinical observations made when the drug is used to treat patients.

Dr. I. Mazurkiewicz-Kwilecki **$26,000.**

Brain histamine: stress and psychoactive drugs.
Stress in excess is harmful to normal persons and prolonged stress is said to lead to depressive illnesses. In depressed patients it is known that the distribution and level of major neurotransmitters is altered. Histamine has recently been established as a central neurotransmitter and the aim of this investigation is to find out the ways in which the level and distribution of histamine is influenced by stress applied to experimental animals.

Dr. Z. Merali **$19,500.**

Human and rat prolactin responses to haloperidol decanoate and fluphenazine decanoate: correlations with plasma drug concentrations and clinical response.
There are often differences between patients who respond differently to identical doses of a drug. At present finding the right dose may be a question of trial and error. This research aims to find a better method by examining substances which circulate in blood and whose level is related to the active level of the drug in the brain.

Dr. D.A.V. Peters **$28,400.**

Prenatal stress: effects on brain development
It has been said that stress during the pregnancy can affect the adult behaviour of the offspring. This study is intended to examine the effects of pre-natal stress on the chemistry of the central nervous system and the later behaviour of animals exposed to stress during their time in the womb. It is hoped that the connexion between behaviour and the underlying events of the central nervous system can be examined.

Dr. R. Singhal **$30,000.**

Central neurotransmitter systems: modification by psychotherapeutic agents.
A great variety of chemicals is known to be active in the brain yet little is known about the effects of drugs used in treatment upon some of these. This study is directed at finding out in precise terms how lithium, commonly used in the treatment of mania, influences a number of the naturally occurring chemicals which function in brain cells.

Drs. R. Singhal and J. Telner **$22,000.**

Antidepressant discriminability, neurochemical correlates and hormonal factors in an animal model of depression.
A number of attempts have been made to find models for psychiatric diseases in animals. Most models fail to mimic the symptoms of depression or do not respond to antidepressant drugs. This investigation is a study of a new model for depressive illness called "learned helplessness". The primary aim of this research is to examine if this stress-based model is a real analogue for depression.

Queen's University

Dr. J. Holden **$49,821.**

Identification of a DNA marker closely linked to the mutation causing X-linked mental retardation (including a Major Equipment Grant).
The aim of this study is to find a genetic marker for the form of mental retardation found in people whose X-chromosome has suffered a mutation. It seems possible that a marker can be found by direct analysis of the DNA in the chromosome. The use of the marker, when one is found, will be tested by examining the family trees of affected individuals.

Dr. K. Jhamandas **$30,159.**

Effects of choline treatment on neurochemical and behavioural deficits associated with central cholinergic damage.
Amongst the diseases of elderly people is Alzheimer's disease – marked by disorders of learning and memory. One proposition which has been put forward is that the symptoms are associated with a chemical deficiency in the brain. The investigation is to find ways in which the brain levels of the deficient chemical can be increased by making an animal model of the disease.

Dr. F. Letemendia **$23,210.**

A comparative study of the antidepressant and cardiac effects of imipramine and doxepin.
Some drugs used to treat depression have significant side effects on the heart and circulation. It is not clearly established which drugs are the safest to use. In this study two commonly used drugs will be compared to find out how effective they are in treating depression and what the effects are on the cardiovascular system when effective antidepressant doses are used.

Dr. C. Woogh **$17,630.**

A cohort study of multiply readmitted non-psychotic patients.
A feature of modern psychiatric treatment which has attracted public attention is the "revolving door" syndrome. Patients are admitted, discharged, re-admitted, discharged and so on. This investigation is designed to find out how multiple re-admission comes about in patients with a non-psychotic illness. The idea is to establish the characteristics of the patients and to analyze the factors which bring about the repeated admissions.

University of Toronto

Drs. U. DeBoni and D. McLachlan **$9,244.**

Chromatin abberations in aging and in Alzheimer's disease.
It is known that changes take place in the brain cells of patients with Alzheimer's disease. This investigation is designed to find out if parallel changes can be seen in cells which are more readily obtained from blood.

Dr. U. DeBoni **$26,648.**

The brain cell nucleus in senile dementia and in model systems of the brain.
Alterations in brain function associated with dementia in old people have been examined. It is not clear which changes in brain cells are critical in altering function nor is it clear if the changes are due to toxic substances or to internally generated processes of change. Dr. DeBoni is examining the cell changes which take place as a function of aluminum poisoning in an attempt to discover if these are typical of the changes seen in the senile brain.

Dr. T. Hattori **$28,644.**

Detailed anatomy of transmitter receptor sites in the basal ganglia.
An important aspect of studying the brain is to find out the precise connexions between one group of cells and another. This investigation is designed to use recently developed techniques to examine the relations between parts of the brain which are known to be associated with important mental illnesses by tracing the nerve fibres to their final destination.

Dr. D. McLachlan **$57,796.**

Dementia of the Alzheimer type.
Examination of the brain cells of patients who suffer from Alzheimer's disease show certain characteristic changes. Dr. McLachlan is examining the idea that these changes are due to aluminum in the brain and to an alteration in the manner by which instructions contained in the chromosomes are translated within each cell.

Dr. M. Moscovitch **$26,350.**

A comparison of memory disorders in the aged and organic amnesics.
Failures of memory are among the most common symptoms of aging patients. Dr. Moscovitch is directing a study which is designed to find out the basis of alterations of memory by comparing patients whose brain is known to have a specified organic disease with others who are simply getting older.

Dr. P. Seeman **$33,800.**

Dopamine receptors in post-mortem brains of schizophrenic patients, and in brains of animals receiving long-term neuroleptic drugs.
The cause of schizophrenia is not known although there are drug treatments which lead to improvement. One hypothesis concerning the cause of schizophrenia is: the brain neurotransmitter dopamine is over-active. This hypothesis is being examined by looking at the brains of patients who suffered from the disease to find out if the structures of the brain – dopamine receptors – fit in with the idea that there is this kind of chemical over-activity.

University of Western Ontario, London

Dr. M.J. Ball **$53,446.**

Neuropathological investigation of the role of the limbic system in the pathogenesis of Alzheimer's dementia.
Changes in the brain cells of elderly patients are seen in Alzheimer's disease. Dr. Ball plans to use a precise method of measuring changes in cell structure and to show how the extent of cell damage is related to the symptoms recorded for each patient. An investigation of this kind will be important in establishing the relations between brain pathology and the observed disorders of aging.

Dr. I. Gotlib **$19,880.**

Interpersonal consequences of depression: factors contributing to the etiology and maintenance of pathogenic interactions.
A factor in mental illness whose importance is as yet unknown is the response of others to patients. It is possible that people confronted with a mentally ill person may act in a way which exacerbates the illness: this is thought to be probable in the case of the depressive illnesses. This study is an attempt to show in detail the interactions between patients and others and to find out if others' reactions influence the course of the disease.

Clarke Institute of Psychiatry, Toronto

Dr. R. Eastwood **$18,117.**

Hearing impairment and mental disorders: an investigation of psychiatric and psycho-social factors associated with hearing loss and compliance with aural rehabilitation in a geriatric population.
It is often said that psychiatric symptoms in elderly people – for example, confusion or unwarranted suspicion – are due to

the fact that they do not see or hear well. This investigation is designed to establish whether there is a relationship between hearing, vision and psychopathological symptoms. If the proposition can be shown to be true then a number of practical consequences follow for the treatment of such symptoms in people with hearing defects or impaired vision.

Dr. K. Freund **$36,450.**

Disorders of phasing of courtship behaviour.
Dr. Freund has developed a view of deviant sexual behaviours which emphasises that each deviant behaviour represents, in vestigial form, an activity which could properly form part of courtship. This view leads to a novel classification of sexual offenders and treatment becomes a more possible therapeutic venture than has been supposed.

Dr. B. Madras **$58,900.**

Isolation of brain dopamine receptors.
The investigation aims at extracting from brain tissue and then purifying, dopamine "receptors" so that the characteristics of the receptors may be examined. Dopamine is a neurotransmitter said to be more than normally active in diseases such as: schizophrenia; Huntington's chorea. Once such a technique is available it will be possible to investigate in detail how the dopamine receptor works.

Dr. B. Shaw **$17,108.**

Cognitive assessment of depression.
In the affective disorders the primary change is in mood; however there are often significant changes in cognition because the patients do not interpret the world in the same way as others do. This study is designed to find out the importance of the cognitive aspect of affective disorders and attempts to assess how important they are in maintaining the disease.

Dr. J. Warsh **$31,030.**

Hydroxylated metabolites of tricylic antidepressants: clinical significance.
Amongst the drugs used to treat psychiatric illnesses are tricyclic antidepressants. These are effective in somewhere between a half to three-quarters of carefully selected patients; an obvious question is why are they not effective in the others? This investigation is aimed at measuring what happens to the drugs once they are in the body – with the objective of finding out what can be established about the circulating levels of drugs in relation to their efficacy in altering the mood of patients.

Dr. P. Whitaker **$27,768.**

Utility and clinical significance of platelet 3H-imipramine binding in psychiatry.
Diseases which are given the same label may turn out on closer examination to contain a variety of patients. Among such diseases are the affective disorders (marked by changes of mood). There are various ways by which investigators have tried to define the different patients. This study is such an attempt: samples of blood are examined and it is hoped that the characteristics which can be established in the blood samples will aid in distinguishing between normal and depressed patients and between different categories of depressed patients.

Hospital for Sick Children, Toronto

Dr. L. Becker **$33,887.**

Dendritic and neuropeptide profiles in mental retardation.
The brains of patients with serious mental retardation may not show any gross abnormalities. This investigation is designed to show in the microstructure of the brain of patients with Down's syndrome that development proceeds in a normal fashion up to approximately six months of age and that thereafter pathological changes are seen. If this hypothesis is correct then intervention at an early age may prevent the regression from occurring.

Drs. K. Minde and C. Corter **$22,234.**

Parental behaviour with premature twins: the effects of multiple birth on parent-infant interaction and attachment patterns.
Children who are born prematurely may be kept in hospital for long periods so that the parents do not have an opportunity to form affectionate bonds with the child in the first weeks of life. Dr. Minde and his colleagues are using twin births to examine in detail the interactions between parents and low-birth weight infants who are maintained in hospital for long intervals before they are allowed to go home for the first time.

Drs. C. Netley and J. Rovet **$37,582.**

Growth, the X chromosome and cognitive development.
It is possible to examine the complement of chromosomes which individuals have. The X and Y chromosomes which determine sex can be identified; it is known that some children have unusual numbers of X or Y chromosomes. To date much of the research concerning children with these abnormalities has been directed to physical growth rather than to intellectual development; this investigation will fill a gap in our knowledge.

Toronto General Hospital

Dr. P. Garfinkel **$70,020.**

Anorexia nervosa: its predispositions, perpetuation and treatment.
Anorexia nervosa is a condition most commonly found amongst young women. It is believed that its prevalence has been increasing recently. Dr. Garfinkel is investigating the factors which predispose individuals to this illness and ways in which it may be treated. He is also examining the prevalence of the condition overseas and amongst high risk groups of young women in Canada.

University Hospital, London

Dr. J. McGlone **$19,500.**

Sexual variation in human brain function.
The human brain is divided into a left and a right half and something is becoming known about the functions served by the right half of the brain. One complication in making such studies is the possibility that men and women are not alike in the division of these functions. Dr. McGlone is examining what happens to the abilities of men and women who have damage to one or the other side of the brain as a result of accidents or strokes.

Sunnybrook Medical Centre, Toronto

Dr. M. Mamelak **$27,000.**

A pharmacological paradigm for manic depressive illness: the effects of lithium.
This study will develop a pharmacological animal model for manic-depressive illness. The model is made by giving rats drugs and then withdrawing them; the sequence of depression and excitement caused by the drug is thought to mimic a manic-depressive illness. A test of whether the model is a good one for human illness will be made by using the same drugs as are used to treat the illness in humans.

Mental Health Centre, Penetanguishene

Dr. V. Quinsey **$27,094.**

Studies in the assessment and treatment of sexual offenders.
A persistent medico-legal problem is the treatment to be accorded to people whose conduct is both illegal and due to mental disease. An example is the sexual offenders who are sent to special treatment centres. Dr. Quinsey is attempting to find out what governs the behaviour of individuals sentenced for sexual offences – in particular the stimulation afforded by violence. He also designs treatments which may make it possible to return such offenders to society.

Individual Awards 1982-83

In 1982-83, 50 Individual Award Applications were received. Of this number 20 were supported for a total of $342,125.

In addition, the Foundation supported 14 ongoing Individual Awards in the amount of $494,019. At the University of Ottawa, Queen's University and the University of Western Ontario a total of $50,625. was provided for the support of three Educational Associateships.

Carleton University, Ottawa

Research Student	Mr. B. Bialik

McMaster University, Hamilton

Research Associates	Dr. G. Brown Dr. D. Campbell Dr. J. Seggie
Research Scholars	Dr. R. Mishra Dr. M. Pisa
Long-Term Fellows	Dr. E. Grof Dr. L. Niles Dr. E. Werstiuk
Velleman Scholarship	Dr. P. Chang

University of Ottawa

Research Associates	Dr. D. Peters Dr. R. Pivik
Research Scholars	Dr. Z. Merali Dr. D. Stuss
Research Fellow	Dr. J. Thakar
Educational Associate	Dr. P. Beauséjour

Queen's University, Kingston

Research Associate	Dr. D. Soudek
Training Awards	Dr. T. Boag Dr. D. Muir
Research Student	Mr. M. Marien
Educational Associate	Dr. F. Jarrett

University of Toronto

Research Associate	Dr. M. Moscovitch
Research Scholar	Dr. U. DeBoni
Training Award	Dr. D. Steinhauer
Research Students	Mr. T-V. Dam Mr. G. Guillemette Ms. D. Kafka Mr. L. Lilly

University of Western Ontario, London

Educational Associate	Dr. E. Waring

Clarke Institute of Psychiatry, Toronto

Research Scholar	Dr. S. Tang
Long-Term Fellow	Dr. P. Whitaker
Research Fellow	Dr. S. Kish
Research Student	Ms. A. Dumbrille-Ross

Hospital for Sick Children, Toronto

Research Associate	Dr. M. Dennis
Research Student	Ms. P. Chee

Toronto General Hospital

Research Fellow	Dr. B. Dorian
Research Fellow	Dr. B. Toner

Wellesley Hospital, Toronto

Research Scholar	Dr. R. Adamec

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